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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,767	05/09/2001	Ying Ee Yip	STL9663	3825
7590	12/10/2003		EXAMINER	RODRIGUEZ, GLENDA P
David K Lucente Seagate Technology LLC Intellectual Property Dept COL2LGL 389 Disc Drive Longmont, CO 80503			ART UNIT	PAPER NUMBER
			2651	7
			DATE MAILED: 12/10/2003	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/851,767	YIP ET AL.
Examiner	Art Unit	
Glenda P. Rodriguez	2651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1)  Responsive to communication(s) filed on 13 August 2003.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

- 4)  Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-6 and 9-13 is/are rejected.

7)  Claim(s) 7 and 8 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

13)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a)  The translation of the foreign language provisional application has been received.

14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.  
4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

Claim 8 is objected to because of the following informalities: In claim 8, the phrase "reference line" lacks antecedent basis. The examiner thinks claim 8 should depend from claim 7 instead of claim 1. This would correct the lack of antecedent basis problem. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Claim 13 is critical or essential to the practice of the invention, but not included in the specification is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). "Storing the parameters in a peripheral device" is not disclosed in the specification.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-6 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimote et al. (5,212,677) in view of Sliger (5,745,313).

Regarding Claim 1, Shimote et al teaches a disc drive comprising at least one disc having a plurality of sectors, a method of storing information on defective sectors comprising steps of defining a cluster comprising at least one defective sector, defining parameters describing the shape and size of the cluster (type, position and dimensions), storing the parameters. See col. 3 line 63 - col. 4 line 29. Shimote et al does not teach the sectors being categorized into zones, sorting defective sectors by zone (zone = cluster), and selecting a reference sector from the cluster. However, this feature is well known in the art as disclosed by Sliger wherein it teaches selecting a single entry in the BPB which to store information about each cluster. This is functionally equivalent to selecting a reference sector, it a single location/reference which to store parameters about the entire cluster. See col. 5 lines 13-51. Although the reference does not teach zone recording, zone recording is well known in the disk drive and official notice is taken thereof. It would have been obvious to apply these steps to each zone because each zone has different characteristics. It would have been obvious to one ordinary skill in the art at the same time the invention was made to modify the teachings of Shimote et al to include the teachings of Sliger, motivation being to describe the physical and logical geometry of the disk as set forth in col. 5 lines 12-13 of Sliger.

Regarding claim 2, Sliger teaches non-defective sectors include the cluster. See col. 5 lines 48-51.

Regarding claims 3 and 4, the reference sector is analogous to the BPB entry for each cluster. Hence, any single sector within the cluster could correspond to the reference sector.

Whether to use the first or last sector is a routine engineering decision based on speed and efficiency.

Regarding claims 5 and 6, Sliger teaches storing the number of sectors per cluster and sectors per track. See col. 5 lines 13-17. These parameters define the scratch parameter and span parameters. It would have been obvious to one ordinary skill in the art at the same time the invention was made to modify the teachings of Shimote et al to include the teachings of Sliger, motivation being to describe the physical and logical geometry of the disk as set forth in col. 5 lines 12-13 of Sliger.

Regarding Claim 9, Shimote et al. teach a method comprising at least one disc having a plurality of sectors, a method of storing information on defective sectors comprising steps of defining a cluster comprising at least one defective sector, defining parameters describing the shape and size of the cluster (type, position and dimensions), storing the parameters. See col. 3 line 63 - col. 4 line 29. Shimote et al does not teach selecting a reference sector from the cluster. However, this feature is well known in the art as disclosed by Sliger wherein it teaches selecting a single entry in the BPB which to store information about each cluster. This is functionally equivalent to selecting a reference sector, it a single location/reference which to store parameters about the entire cluster. See col. 5 lines 13-51. It would have been obvious to one ordinary skill in the art at the same time the invention was made to modify the teachings of Shimote et al to include the teachings of Sliger, motivation being to describe the physical and logical geometry of the disk as set forth in col. 5 lines 12-13 of Sliger.

Regarding Claim 10, Shimote et al. and Sliger teach all the limitations of Claim 9. Sliger further teach wherein the parameters are stored in a storage apparatus See Col. 5, Lines 10-20.

Regarding Claim 11, Shimote et al. and Sliger teach all the limitations of Claim 9. Sliger further teach wherein the locations are sectors. See Col. 5, Lines 10-20.

Regarding Claim 12, Shimote et al. and Sliger teach all the limitations of Claim 9. Sliger further teach sorting a plurality of defective locations into zones and performing steps a-d for each zone. Although the reference does not teach zone recording, zone recording is well known in the disk drive and official notice is taken thereof. It would have been obvious to one ordinary skill in the art at the same time the invention was made to modify the teachings of Shimote et al to include the teachings of Sliger, motivation being to describe the physical and logical geometry of the disk as set forth in col. 5 lines 12-13 of Sliger.

Regarding Claim 13, Shimote et al teaches a method comprising at least one disc having a plurality of sectors, a method of storing information on defective sectors comprising steps of defining a cluster comprising at least one defective sector, defining parameters describing the shape and size of the cluster (cluster = zone) (type, position and dimensions), storing the parameters and storing the data in a peripheral device (Shimote et al. teach storing the data in a memory, which is obvious in the art that is a peripheral device.). See col. 3 line 63 - col. 4 line 29. Shimote et al does not teach selecting a reference sector from the cluster. However, this feature is well known in the art as disclosed by Sliger wherein it teaches selecting a single entry in the BPB which to store information about each cluster. This is functionally equivalent to selecting a reference sector, it a single location/reference which to store parameters about the entire cluster. Sliger teach that in the BPB entry it stores shape and size of the cluster. See col. 5 lines 13-51. It would have been obvious to one ordinary skill in the art at the same time the invention was made to modify the teachings of Shimote et al to include the teachings of Sliger,

motivation being to describe the physical and logical geometry of the disk as set forth in col. 5 lines 12-13 of Sliger.

#### ***Response to Arguments***

Applicant's arguments filed 08/13/2003 have been fully considered but they are not persuasive. Applicant states in Page 1 of Remarks that "Sliger does not have entries for each particular cluster". Examiner cannot concur with the Applicant because Applicant does not Claim that the entries need to be in a particular cluster. Sliger teaches that the entries are stored in a BPB block, which stores parameters in a particular area of the disk (Pat. No. 5, 745, 313; Col. 5, Lines 10-18). Applicant further states that "simply because something may be considered *functionally equivalent* does not necessarily mean that replacing a Claim feature with the *functionally equivalent* is obvious". According to the Applicant, a reference sector is a sector in the disk which is chosen to store parameters and cluster data to it. Sliger further teach that in a specific sector it stores data pertaining of parameters and cluster information (Pat. No. 5, 745, 313; Col. 5, Lines 10-31). Therefore, the invention presented by Sliger is *functionally equivalent* to the function that the reference sector presented by the Applicant in its application.

#### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 2651

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenda P. Rodriguez whose telephone number is (703)305-8411. The examiner can normally be reached on Monday thru Thursday: 7:00-5:00; alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (703) 308-4825. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6743.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9000.

*GPR*  
gpr  
November 20, 2003.

*[Signature]*  
DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600